

The EU's innovation indicators are too narrowly focused

In 2002, the EU and its member states set a target of spending 3 per cent of GDP on R&D. The target has become a focus of research and innovation policy, and a de facto coordinating measure for the EU. But the approach of using inputs to set and assess policy has come under increasing criticism—one can, after all, spend a lot of money on R&D and end up with little to show for it.

Responding to this criticism, the European Commission launched the EU 2020 Innovation Indicator in 2013. This was intended as a gauge of member states' success in turning R&D spending into tangible economic benefits, such as employment and growth. Its primary objective was to complement the measure of R&D spending with an indicator of outputs.

The EU 2020 Innovation Indicator combines a count of patent applications with measures of the share of knowledge-intensive innovative industries in the entire economy, fast-growing companies in these industries, and knowledge-intensive exports as a proportion of total exports.

As a means of measuring innovation outputs, this approach represents progress. There are, however, several problems with the indicators chosen.

First, counting patents tells you little about the economic impact of innovation. Many patents are not turned into innovations, while many commercially successful innovations are not based on patents.

More significantly, while the EU's output indicator is well suited to detecting activity in hi-tech fields such as the digital economy, robotics, advanced materials and so on, these usually only represent a small fraction of a country's economic and innovative activity.

Focusing exclusively on hi-tech industries will miss the impact of innovation in many large manufacturing sectors such as food, textiles, metals and paper, as well as in many services such as tourism and retail. Together, these employ a lot of people and generate a large chunk of the EU's GDP. Even fast-growing companies with a disruptive impact on their sector, such as Amazon (retail), Airbnb (tourism) and Uber (transport), would fall outside the indicator's scope.

The EU's innovation output indicator also misses the globalised nature of modern business, in particular in manufacturing. Companies often do their research

and innovation in one country and their production in another. The Hungarian economy, for example, shows a high share of hi-tech sectors simply because many technology firms, such as big car companies, have assembly plants there.

As a result, countries may get a misleading idea of the impact of their public spending on R&D and innovation. They might fail to detect economic impact because they aren't looking in the right place.

The focus on measuring innovation output with a narrow set of hi-tech sectors is also at odds with the EU policy of smart specialisation. This aims for regions to play to their strengths, rather than all going for the same set of fancy new fields, such as biotech and nanotechnology.

The EU's approach could be seen as measuring structural change—the degree to which knowledge-intensive sectors are increasing their share of economic activity. If we want to measure the true economic impact of innovation, we should be trying to measure it as broadly as possible, not just focusing on a small set of hi-tech sectors.

A more complete measure of innovation would include a measure of the movements towards knowledge-intensive approaches within all sectors, resulting in, for example, lower costs, better products or reduced environmental impact. The trade literature calls this 'climbing the quality ladder'.

By moving companies up the quality ladder, innovation helps them defend against low-cost competition created by globalisation. This process—which can also be called structural upgrading—is at least as important as increasing the economic share of a few hi-tech sectors.

The Commission is aware of the risks of a blinkered measure of innovation. But measures of structural upgrading are yet to be included in the European Innovation Scoreboard, and it could be a struggle to change the 2020 Innovation Indicator so soon after its introduction.

Of course, progress also depends on coming up with workable indicators able to spot the economic impact of innovation in less knowledge-intensive sectors. Besides indicators of export quality, it would be useful to be able to spot firms in all sectors that are achieving rapid growth due to innovation. This would help the EU address its well-known problem of scaling up young, innovative firms to a size that generates substantial numbers of jobs. *Something to add? Email comment@ResearchResearch.com*

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